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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/042,991

DATE: 01/30/2002

TIME: 15:33:26

Input Set : A:\W123650.txt

Output Set: N:\CRF3\01302002\J042991.raw

ENTERED

3 <110> APPLICANT: Ian M. Whitehead
 4 Alan Slusarenko
 5 Duncan Gaskin
 6 Alan Brash
 7 Nathalie Tijet
 9 <120> TITLE OF INVENTION: GUAVA (PSIDIUM GUAJAVA) 13-HYDROPEROXIDE
 10 LYASE AND USES THEREOF
 13 <130> FILE REFERENCE: 06027.0001U3
 C--> 15 <140> CURRENT APPLICATION NUMBER: US/10/042,991
 C--> 16 <141> CURRENT FILING DATE: 2002-01-09
 18 <160> NUMBER OF SEQ ID NOS: 27
 20 <170> SOFTWARE: FastSEQ for Windows Version 3.0
 22 <210> SEQ ID NO: 1
 23 <211> LENGTH: 7
 24 <212> TYPE: PRT
 25 <213> ORGANISM: Psidium Guajava (guava)
 27 <400> SEQUENCE: 1
 28 Thr Tyr Pro Pro Ser Leu Ser
 29 1 5
 31 <210> SEQ ID NO: 2
 32 <211> LENGTH: 476
 33 <212> TYPE: PRT
 34 <213> ORGANISM: Psidium Guajava (guava)
 36 <400> SEQUENCE: 2
 39 Met Ser Ser Thr Tyr Pro Pro Ser Leu Ser Pro Pro Ser Ser Pro Arg
 40 1 5 10 15
 41 Pro Thr Thr Leu Pro Val Arg Thr Ile Pro Gly Ser Tyr Gly Trp Pro
 42 20 25 30
 43 Leu Leu Gly Pro Ile Ser Asp Arg Leu Asp Tyr Phe Trp Phe Gln Gly
 44 35 40 45
 45 Pro Glu Thr Phe Phe Arg Lys Arg Ile Glu Lys Tyr Lys Ser Thr Val
 46 50 55 60
 47 Phe Arg Ala Asn Val Pro Pro Cys Phe Pro Phe Phe Ser Asn Val Asn
 48 65 70 75 80
 49 Pro Asn Val Val Val Val Leu Asp Cys Glu Ser Phe Ala His Leu Phe
 50 85 90 95
 51 Asp Met Glu Ile Val Glu Lys Ser Asn Val Leu Val Gly Asp Phe Met
 52 100 105 110
 53 Pro Ser Val Lys Tyr Thr Gly Asn Ile Arg Val Cys Ala Tyr Leu Asp
 54 115 120 125
 55 Thr Ser Glu Pro Gln His Ala Gln Val Lys Asn Phe Ala Met Asp Ile
 56 130 135 140
 57 Leu Lys Arg Ser Ser Lys Val Trp Glu Ser Glu Val Ile Ser Asn Leu

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58 145          150          155          160
59 Asp Thr Met Trp Asp Thr Ile Glu Ser Ser Leu Ala Lys Asp Gly Asn
60          165          170          175
61 Ala Ser Val Ile Phe Pro Leu Gln Lys Phe Leu Phe Asn Phe Leu Ser
62          180          185          190
63 Lys Ser Ile Ile Gly Ala Asp Pro Ala Ala Ser Pro Gln Val Ala Lys
64          195          200          205
65 Ser Gly Tyr Ala Met Leu Asp Arg Trp Leu Ala Leu Gln Leu Leu Pro
66          210          215          220
67 Thr Ile Asn Ile Gly Val Leu Gln Pro Leu Val Glu Ile Phe Leu His
68          225          230          235          240
69 Ser Trp Ala Tyr Pro Phe Ala Leu Val Ser Gly Asp Tyr Asn Lys Leu
70          245          250          255
71 Tyr Gln Phe Ile Glu Lys Glu Gly Arg Glu Ala Val Glu Arg Ala Lys
72          260          265          270
73 Ala Glu Phe Gly Leu Thr His Gln Glu Ala Ile His Asn Leu Leu Phe
74          275          280          285
75 Ile Leu Gly Phe Asn Ala Phe Gly Gly Phe Ser Ile Phe Leu Pro Thr
76          290          295          300
78 Leu Leu Ser Asn Ile Leu Ser Asp Thr Thr Gly Leu Gln Asp Arg Leu
79          305          310          315          320
80 Arg Lys Glu Val Arg Ala Lys Gly Gly Pro Ala Leu Ser Phe Ala Ser
81          325          330          335
82 Val Lys Glu Met Glu Leu Val Lys Ser Val Val Tyr Glu Thr Leu Arg
83          340          345          350
84 Leu Asn Pro Pro Val Pro Phe Gln Tyr Ala Arg Ala Arg Lys Asp Phe
85          355          360          365
86 Gln Leu Lys Ser His Asp Ser Val Phe Asp Val Lys Lys Gly Glu Leu
87          370          375          380
88 Leu Cys Gly Tyr Gln Lys Val Val Met Thr Asp Pro Lys Val Phe Asp
89          385          390          395          400
90 Glu Pro Glu Ser Phe Asn Ser Asp Arg Phe Val Gln Asn Ser Glu Leu
91          405          410          415
92 Leu Asp Tyr Leu Tyr Trp Ser Asn Gly Pro Gln Thr Gly Thr Pro Thr
93          420          425          430
94 Glu Ser Asn Lys Gln Cys Ala Ala Lys Asp Tyr Val Thr Leu Thr Ala
95          435          440          445
96 Cys Leu Phe Val Ala Tyr Met Phe Arg Arg Tyr Asn Ser Val Thr Gly
97          450          455          460
98 Ser Ser Ser Ser Ile Thr Ala Val Glu Lys Ala Asn
99          465          470          475
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102 <211> LENGTH: 480
103 <212> TYPE: PRT
104 <213> ORGANISM: Psidium Guajava (guava)
106 <400> SEQUENCE: 3
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108 1          5          10          15
109 Ser Ser Pro Arg Pro Thr Thr Leu Pro Val Arg Thr Ile Pro Gly Ser

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110		20		25		30	
111	Tyr Gly Trp Pro Leu Leu Gly Pro Ile Ser Asp Arg Leu Asp Tyr Phe						
112		35		40		45	
113	Trp Phe Gln Gly Pro Glu Thr Phe Phe Arg Lys Arg Ile Glu Lys Tyr						
114		50		55		60	
115	Lys Ser Thr Val Phe Arg Ala Asn Val Pro Pro Cys Phe Pro Phe Phe						
116	65		70		75		80
117	Ser Asn Val Asn Pro Asn Val Val Val Val Leu Asp Cys Glu Ser Phe						
118		85		90		95	
119	Ala His Leu Phe Asp Met Glu Ile Val Glu Lys Ser Asn Val Leu Val						
120		100		105		110	
121	Gly Asp Phe Met Pro Ser Val Lys Tyr Thr Gly Asn Ile Arg Val Cys						
122		115		120		125	
123	Ala Tyr Leu Asp Thr Ser Glu Pro Gln His Ala Gln Val Lys Asn Phe						
124		130		135		140	
125	Ala Met Asp Ile Leu Lys Arg Ser Ser Lys Val Trp Glu Ser Glu Val						
126	145		150		155		160
127	Ile Ser Asn Leu Asp Thr Met Trp Asp Thr Ile Glu Ser Ser Leu Ala						
128		165		170		175	
129	Lys Asp Gly Asn Ala Ser Val Ile Phe Pro Leu Gln Lys Phe Leu Phe						
130		180		185		190	
131	Asn Phe Leu Ser Lys Ser Ile Ile Gly Ala Asp Pro Ala Ala Ser Pro						
132		195		200		205	
133	Gln Val Ala Lys Ser Gly Tyr Ala Met Leu Asp Arg Trp Leu Ala Leu						
134		210		215		220	
135	Gln Leu Leu Pro Thr Ile Asn Ile Gly Val Leu Gln Pro Leu Val Glu						
136	225		230		235		240
137	Ile Phe Leu His Ser Trp Ala Tyr Pro Phe Ala Leu Val Ser Gly Asp						
138		245		250		255	
139	Tyr Asn Lys Leu Tyr Gln Phe Ile Glu Lys Glu Gly Arg Glu Ala Val						
140		260		265		270	
141	Glu Arg Ala Lys Ala Glu Phe Gly Leu Thr His Gln Glu Ala Ile His						
142		275		280		285	
143	Asn Leu Leu Phe Ile Leu Gly Phe Asn Ala Phe Gly Gly Phe Ser Ile						
144		290		295		300	
145	Phe Leu Pro Thr Leu Leu Ser Asn Ile Leu Ser Asp Thr Thr Gly Leu						
146	305		310		315		320
147	Gln Asp Arg Leu Arg Lys Glu Val Arg Ala Lys Gly Gly Pro Ala Leu						
148		325		330		335	
149	Ser Phe Ala Ser Val Lys Glu Met Glu Leu Val Lys Ser Val Val Tyr						
150		340		345		350	
151	Glu Thr Leu Arg Leu Asn Pro Pro Val Pro Phe Gln Tyr Ala Arg Ala						
152		355		360		365	
153	Arg Lys Asp Phe Gln Leu Lys Ser His Asp Ser Val Phe Asp Val Lys						
154		370		375		380	
156	Lys Gly Glu Leu Leu Cys Gly Tyr Gln Lys Val Val Met Thr Asp Pro						
157	385		390		395		400
158	Lys Val Phe Asp Glu Pro Glu Ser Phe Asn Ser Asp Arg Phe Val Gln						
159		405		410		415	

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160 Asn Ser Glu Leu Leu Asp Tyr Leu Tyr Trp Ser Asn Gly Pro Gln Thr
161           420           425           430
162 Gly Thr Pro Thr Glu Ser Asn Lys Gln Cys Ala Ala Lys Asp Tyr Val
163           435           440           445
164 Thr Leu Thr Ala Cys Leu Phe Val Ala Tyr Met Phe Arg Arg Tyr Asn
165           450           455           460
166 Ser Val Thr Gly Ser Ser Ser Ser Ile Thr Ala Val Glu Lys Ala Asn
167 465           470           475           480
169 <210> SEQ ID NO: 4
170 <211> LENGTH: 483
171 <212> TYPE: PRT
172 <213> ORGANISM: Psidium Guajava (guava)
174 <400> SEQUENCE: 4
175 Met Ser Asn Met Ser Pro Ala Met Ser Ser Thr Tyr Pro Pro Ser Leu
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177 Ser Pro Pro Ser Ser Pro Arg Pro Thr Thr Leu Pro Val Arg Thr Ile
178           20           25           30
179 Pro Gly Ser Tyr Gly Trp Pro Leu Leu Gly Pro Ile Ser Asp Arg Leu
180           35           40           45
181 Asp Tyr Phe Trp Phe Gln Gly Pro Glu Thr Phe Phe Arg Lys Arg Ile
182           50           55           60
183 Glu Lys Tyr Lys Ser Thr Val Phe Arg Ala Asn Val Pro Pro Cys Phe
184 65           70           75           80
185 Pro Phe Phe Ser Asn Val Asn Pro Asn Val Val Val Val Leu Asp Cys
186           85           90           95
187 Glu Ser Phe Ala His Leu Phe Asp Met Glu Ile Val Glu Lys Ser Asn
188           100          105          110
189 Val Leu Val Gly Asp Phe Met Pro Ser Val Lys Tyr Thr Gly Asn Ile
190           115          120          125
191 Arg Val Cys Ala Tyr Leu Asp Thr Ser Glu Pro Gln His Ala Gln Val
192           130          135          140
193 Lys Asn Phe Ala Met Asp Ile Leu Lys Arg Ser Ser Lys Val Trp Glu
194 145          150          155          160
195 Ser Glu Val Ile Ser Asn Leu Asp Thr Met Trp Asp Thr Ile Glu Ser
196           165          170          175
197 Ser Leu Ala Lys Asp Gly Asn Ala Ser Val Ile Phe Pro Leu Gln Lys
198           180          185          190
199 Phe Leu Phe Asn Phe Leu Ser Lys Ser Ile Ile Gly Ala Asp Pro Ala
200           195          200          205
201 Ala Ser Pro Gln Val Ala Lys Ser Gly Tyr Ala Met Leu Asp Arg Trp
202           210          215          220
203 Leu Ala Leu Gln Leu Leu Pro Thr Ile Asn Ile Gly Val Leu Gln Pro
204 225          230          235          240
205 Leu Val Glu Ile Phe Leu His Ser Trp Ala Tyr Pro Phe Ala Leu Val
206           245          250          255
207 Ser Gly Asp Tyr Asn Lys Leu Tyr Gln Phe Ile Glu Lys Glu Gly Arg
208           260          265          270
209 Glu Ala Val Glu Arg Ala Lys Ala Glu Phe Gly Leu Thr His Gln Glu
210           275          280          285

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Output Set: N:\CRF3\01302002\J042991.raw

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211 Ala Ile His Asn Leu Leu Phe Ile Leu Gly Phe Asn Ala Phe Gly Gly
212      290                      295                      300
213 Phe Ser Ile Phe Leu Pro Thr Leu Leu Ser Asn Ile Leu Ser Asp Thr
214 305                      310                      315                      320
215 Thr Gly Leu Gln Asp Arg Leu Arg Lys Glu Val Arg Ala Lys Gly Gly
216      325                      330                      335
217 Pro Ala Leu Ser Phe Ala Ser Val Lys Glu Met Glu Leu Val Lys Ser
218      340                      345                      350
219 Val Val Tyr Glu Thr Leu Arg Leu Asn Pro Pro Val Pro Phe Gln Tyr
220      355                      360                      365
221 Ala Arg Ala Arg Lys Asp Phe Gln Leu Lys Ser His Asp Ser Val Phe
222      370                      375                      380
223 Asp Val Lys Lys Gly Glu Leu Leu Cys Gly Tyr Gln Lys Val Val Met
224 385                      390                      395                      400
225 Thr Asp Pro Lys Val Phe Asp Glu Pro Glu Ser Phe Asn Ser Asp Arg
226      405                      410                      415
227 Phe Val Gln Asn Ser Glu Leu Leu Asp Tyr Leu Tyr Trp Ser Asn Gly
228      420                      425                      430
229 Pro Gln Thr Gly Thr Pro Thr Glu Ser Asn Lys Gln Cys Ala Ala Lys
230      435                      440                      445
231 Asp Tyr Val Thr Leu Thr Ala Cys Leu Phe Val Ala Tyr Met Phe Arg
232      450                      455                      460
234 Arg Tyr Asn Ser Val Thr Gly Ser Ser Ser Ser Ile Thr Ala Val Glu
235 465                      470                      475                      480
236 Lys Ala Asn
239 <210> SEQ ID NO: 5
240 <211> LENGTH: 8
241 <212> TYPE: PRT
242 <213> ORGANISM: Psidium Guajava (guava)
244 <400> SEQUENCE: 5
245 Met Ala Arg Val Val Met Ser Asn
246 1 5
248 <210> SEQ ID NO: 6
249 <211> LENGTH: 488
250 <212> TYPE: PRT
251 <213> ORGANISM: Psidium Guajava (guava)
253 <400> SEQUENCE: 6
254 Met Ala Arg Val Val Met Ser Asn Met Ser Pro Ala Met Ser Ser Thr
255 1 5 10 15
256 Tyr Pro Pro Ser Leu Ser Pro Pro Ser Ser Pro Arg Pro Thr Thr Leu
257 20 25 30
258 Pro Val Arg Thr Ile Pro Gly Ser Tyr Gly Trp Pro Leu Leu Gly Pro
259 35 40 45
260 Ile Ser Asp Arg Leu Asp Tyr Phe Trp Phe Gln Gly Pro Glu Thr Phe
261 50 55 60
262 Phe Arg Lys Arg Ile Glu Lys Tyr Lys Ser Thr Val Phe Arg Ala Asn
263 65 70 75 80
264 Val Pro Pro Cys Phe Pro Phe Phe Ser Asn Val Asn Pro Asn Val Val
265 85 90 95

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VERIFICATION SUMMARY

PATENT APPLICATION: US/10/042,991

DATE: 01/30/2002

TIME: 15:33:27

Input Set : A:\W123650.txt

Output Set: N:\CRF3\01302002\J042991.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application Number
L:16 M:271 C: Current Filing Date differs, Replaced Current Filing Date